

Healthy Communities, Healthy Lives:

New Zealand Public Health Nutrition and Physical Activity Sector Vision 2024

All New Zealanders live, learn, work and grow in environments that support healthy eating and physical activity.

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Vision

All New Zealanders live, learn, work and grow in environments that support healthy eating and physical activity.

We seek a future in which three priorities are achieved:

- All people living in New Zealand have sufficient access to food that is affordable, healthy and safe to eat.
- Children are free from exposure to food and beverage marketing messages.
- Being active is the norm and people should avoid sitting for too long.

To achieve these we need to draw on the expertise, insights, goodwill and resources within our sectors and communities.

Purpose

This document pulls together the strands of work being undertaken by a number of groups and agencies passionate about healthy living, nutrition and physical activity. It describes three priority areas and suggests strategies to achieve gains in these. It is intended to stimulate discussion, research and further action within the health, education and recreation sectors, and other sectors with influence in these areas.

The need for a sector vision

The sector requires a focal point for activity to improve access to affordable, healthy and safe food, protect children from harmful food and beverage marketing messages, and increase physical activity.

We wish to reframe public health nutrition and physical activity promotion and draw on the perspective of Māori health and positive health models.

These twin requirements have driven the development of this sector vision to inspire change.

Guiding principles

Toi Tangata has provided the following tauparapara or introductory salutation to guide the vision's development.

This tauparapara encompasses many important aspects of health and wellbeing. The term *tihei mauri ora* refers to the breath of life; *mauri* to the life force all living things share. *Tuia* means to bind, signifying the importance of connections between people. *E ngā mana* indicates that everyone has their own mana, talent, and contribution. *E ngā reo* suggests that everyone has their own language, voice and beliefs. Therefore within this tauparapara, the tapu, mana and whakapapa of the listener is acknowledged.

Tihei mauri ora	**Behold the breath of life**
Tuia ki runga	**Fasten above**
Tuia ki raro	**Bind below**
Tuia ki roto	**Unite from within**
Tuia ki waho	**Unify the outer**
Tuia te here tangata	**Unify the strand of humanity**
Ka rongo te pō, ka rongo te ao	**Listen constantly night and day**
E ngā mana	**I acknowledge your mana**
E ngā reo	**I acknowledge your voice**
E ngā karanga maha	**I acknowledge your diversity**
Tēnā tātou katoa	**I greet you all**

Opportunities and challenges

OPPORTUNITIES

There is an opportunity to reframe the public health discussion about nutrition and physical activity so it aligns more clearly with our vision for change.

Current discussion is based largely on ideas of sickness and the deficit model of health. Within this framework, returning people to a 'risk-free' state is considered desirable – for example, reducing obesity and reducing CVD risk are regarded as good outcomes. Health has become synonymous with the absence of disease, with individuals, whānau and communities increasingly seen as problems needing to be fixed.

We would like to turn this notion on its head. The deficit-based approach focuses on the provision of secondary care and facilities to cater for any needs which arise, but it is not sustainable to continue growing these services. A new approach is needed, one which weaves together core strands of Māori health and humanism with a Western positive psychology health model which encourages people to engage with all aspects of their lives, and to flourish.

We have an opportunity to provide leadership on these issues, and to work together effectively for change.

> ***'A new approach is needed, one which weaves together core strands of Māori health and humanism with a Western positive psychology.'***

CHALLENGES

Organisations and individuals working to inspire change in these areas face a number of challenges, including the need to:

- strengthen the voices of communities so community and family/whānau leaders feel empowered to speak out
- build support for change at political, policy and decision-making levels in order to secure the resources needed
- advocate for evidence-based policies and programmes to reduce poverty and mitigate its effects
- build support for evidence-based laws, rules and policies to improve our food environments, and to include the promotion and availability of healthy food.

KEY MESSAGES

- **Healthy living is everyone's business – we all benefit when we get it right.**
  Toiora toi tangata – Ko te toi o ngā ora ko te whānau ora
- **We all need access to healthy, affordable and safe food for ourselves and our families.**
  He nui kai, he iti kawenga tapu (A lot of food but very little sacred substance)
- **Let's keep schools and places of recreation, sport and other activities free of messages marketing foods and beverages to our children.**
  Ruia taitea toitū ko taitaka (Strip away that which is useless)
- **We will be healthier if we spend more time standing and on the move.**
  Tama tū tama ora, tama moe tama mate (He/she who stands lives)
- **Families are the right people in the right place to encourage children to eat healthily and be active.**
  Ko te toi o ngā ora, ko te whānau ora (The pinnacle of health is whole family wellbeing)
- **By working together, we can make a difference.**
  Mā pango, mā whero ka ora ai te iwi

AUDIENCES

This document has been written primarily for organisations, researchers, funders, decision-makers and policy-makers with an interest in improving nutrition, increasing physical activity and reducing obesity.

The main audiences for change include:

- decision-makers, policy-makers and funders
- education and health providers
- community and family/whānau leaders
- researchers.

We have an opportunity to provide leadership on these issues, and to work together effectively for change.

SPOKESPEOPLE

A range of perspectives and voices to effect change are needed:

- families and whānau
- central government (eg, Ministers, lead agencies on specific issues, opposition and minor political parties)
- education sector (eg, school principals, boards of trustees)
- health sector (eg, clinicians, health promoters)
- non-government organisations (eg, social agencies working on poverty-related issues, organisations representing the interests of children or specific communities, chronic disease organisations such as the Heart Foundation, Cancer Society, etc)
- community leaders (eg, local body leaders, Māori, Pacific, Asian).

Priority one: Healthy, safe, affordable food

All people living in New Zealand will have sufficient access to healthy food that is affordable and safe to eat

Our vision is for a New Zealand where children grow up learning the physical, social and cultural value of nutritious food from whānau, community, and society. In this New Zealand, nutritious food is the preferred, easiest, and the most affordable choice. Children and their families can be certain they will have enough nutritious and appropriate food to eat.

Communities are increasingly taking a central role in initiatives to improve food security. For example, a Wellington food bank which traditionally provided access to emergency assistance and food parcels has evolved into a 'community food centre'. It offers a place to learn and share skills about gardening, cooking and healthy eating, to access gardening tools and to grow and harvest

fruit, vegetables and traditional kai. Not only does this help people grow and prepare food, it also strengthens the community's social skills and partnerships, and encourages advocacy to support an environment where healthy and safe food is easier to obtain.

BACKGROUND

Access to sufficient healthy, affordable and safe food (food security) is a basic human right but increasingly something not all people in New Zealand can rely on. In 2008/09 only 3 out of 5 households in New Zealand had a food supply they could completely or almost completely rely on. Households in neighbourhoods with higher levels of deprivation were less likely to have food security, as were Māori and Pacific households.

This means some people in this country are not able to obtain the food they need for a healthy life. Families who do not have good access to healthy safe food have been found to eat fewer nutrients from fruit, vegetables and dairy products, and have a higher intake of fat (Parnell 2005). If people are to live full and healthy lives, they must first be able to feed their families/whānau and themselves.

Previous strategies to improve food security have promoted healthy eating based on individual choices. This is despite the fact many people – particularly those on low incomes – do not have the resources to act on recommendations to change what they are eating (Nova Scotia 2005).

To effect change, intervention is needed across many levels, from community-led initiatives through to policy changes at national level. Strong action and commitment across sectors is needed to address the physical, economic, political and sociocultural influences on food security.

> ***'If people are to live full and healthy lives, they must first be able to feed their families/whānau and themselves.'***

RECOMMENDED ACTIONS

1. Support and strengthen the capacity and leadership of whānau and communities to improve access to safe, healthy and affordable food.
   Nā tō rourou, nā tōku rourou ka ora ai te iwi – with your basket and mine, the people will thrive.

2. Bring together a cross-sectoral coalition (eg, food policy council) to work collaboratively and take action to improve affordability and access to healthy food.
   E koekoe te tūī, e ketekete te kākā, e kūkū te kererū – the tūī chatters, the parrot gabbles, the wood pigeon coos. It takes all kinds of people.

3. Encourage and support all members of the food supply chain to do their part in ensuring healthy foods are available, affordably priced, and widely promoted in stores.
   E raka te mauī, e raka te katau – a community can use all the skills of its people.

4. Advocate for local and central government to take a lead role in developing environmental policies that ensure a clean supply of water and safe food.
   Ko au te whenua, ko te whenua ko au – I am the land and the land is me.

5. Continue to build and use the available evidence to influence access to healthy and affordable food for people on low incomes.
   Whāia te iti kahurangi ki te tūohu koe, me he maunga teitei – pursue excellence, should you stumble, let it be to a lofty mountain.

EVIDENCE TO SUPPORT ACTIONS

COMMUNITY CAPACITY AND LEADERSHIP

Strengthening whānau capacity and leadership is critical to any social, economic, cultural and health improvements for whānau (Ministry of Health 2011). The whakatauki embedded within the sector vision – Nā tō rourou, nā taku rourou ka ora ai te iwi: with my food basket and your food basket, the people will thrive – describes the need to improve and value people's ability to improve access to safe, healthy and affordable food. The rourou also illustrates the need to be woven with strength to hold kai accessible to all.

Relevant literature is sparse, with most published international articles grounded within participatory research approaches. For example, Jha (2009) advocates for public action by mobilising communities to address food security in India. This paper highlights community-driven food security activities which have successfully reached out to marginalised communities. Native Americans in Northern Canada used a community-based research project to identify significant racial injustice and physical and financial barriers to accessing healthy and culturally appropriate foods. This approach led to successful policies and numerous projects (Jernigan et al 2011). In another example, the leadership and action of youth in a San Francisco neighbourhood (Vásquez et al 2007) helped to change policies and improve local food security in just three years.

Meanwhile, within Aotearoa New Zealand the Government's Healthy Eating Healthy Action (HEHA) strategy (Ministry of Health 2008) provided funding up until 2012 to help communities improve nutrition and encourage more physical activity. Initiatives such as community gardens and community kitchens developed in response to a lack of food security. Indigenous approaches led by whānau, hapu and iwi, such as rāhui, have been used traditionally as a successful approach to food security and have been growing in use in recent times. These offer an effective approach (Maxwell et al 2007) to support breeding stocks, regeneration and sustainability of kai for now and the future. Following the Christchurch earthquakes in 2010/11, many innovative ways to address food insecurity have arisen through leadership within communities. Initiatives such as **Project Lyttelton** and **Hand over a Hundy**, while not yet evaluated, highlight the ability of communities to develop innovative solutions to improve access to safe, healthy food.

Whānau and communities have the knowledge, ability and innovation to lead. Future solutions need to ensure that capacity is provided and strengthened to ensure whānau and communities are supported to create strong 'rourou' full of safe, healthy and affordable kai, accessible by all.

CROSS-SECTORAL COALITIONS AND FOOD POLICY COUNCILS

Food policy councils are a good way to work collaboratively across sectors to address food security issues. A number of food policy councils or coalitions have formed internationally to improve access to safe, healthy food and to promote sustainable local food systems. Food policy councils work across sectors to engage with governments, communities, local businesses and individuals. These groups can use their diversity and influence to improve parts of the food system, make practical policy recommendations, develop local food charters, and support coordinated local action.

Canada's Toronto Food Policy Council is an example of a group that is making a difference. It was set up in 1991 and includes representatives from the local Board of Health, Toronto City Council, farm and rural communities close to the Greater Toronto Area, Toronto Youth Food Policy Council members and up to 22 citizen members from diverse food sectors. Achievements include the Council's 'Buy Ontario' food programme to increase hospital purchases of local foods, and a not-for-profit healthy food delivery system 'Field to Table' for Toronto's low-income citizens, which provides affordable, nourishing, regionally-sourced food to 15,000 people each month.

Food policy councils are in the early stages of forming in New Zealand. An example is the Auckland Food Alliance (AFA), a collaboration of sectors and individuals trying to improve food security within Auckland.

FOOD SUPPLY CHAIN

International and New Zealand studies have found there are more fast food and convenience stores, offering less healthy foods, within easy travelling distance for people living in deprived areas. Overseas research has found an association between poor health and a high number of food outlets in an area, but this association has not been extensively examined in New Zealand.

Economic forces of supply and demand, and the impact of suppliers and distributers and government policies related to food affordability and food advertising have influenced store stocking, pricing and promotion of healthy foods in low socioeconomic areas (Robinson 2011; Department of Business, Innovation and Skills 2007). Working with the 'food system' and environmental factors therefore offers opportunities to support easier access and increased demand for healthier and more affordable food choices for everyone.

Initiatives are underway to improve access to healthy and affordable food in a number of towns and city centres, such as the Healthy Kai programme in Auckland and Hauraki Healthy Kai in Paeroa. The National Heart Foundation also provides resources and tools for the hospitality and retail sector to support skill development and food reformulation within the food industry. However, resources for such programmes are limited so other affordable and sustainable ways to address the 'up stream' influences on the food system are needed.

New Zealand and international research supports the need for initiatives that improve access to good quality, affordable food (Bowers et al 2009; Levi et al 2011). Wide-ranging programmes involving government agencies, key organisations and individuals within the system of food production and distribution are considered most likely to provide sustainable and affordable ways of improving access to healthy food for all (Swinburn et al 2011).

Multi-faceted interventions with initiatives from government and across the food chain (Swinburn et al 2011; Bowers et al 2009; Gortmaker et al 2011; United Nations General Assembly 2012) to address the impacts of pricing, promotion and availability are most likely to provide sustainable and affordable ways of improving access to healthy food for all (Swinburn et al 2011). Swinburn (1999) recommends governments lead the way by putting in place the necessary regulation, investment, monitoring and research in order to reverse the drivers of obesity.

ENVIRONMENTAL POLICIES FOR SAFE AND CLEAN FOOD AND WATER

The United Nations definition of food security is 'all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life' (Harris 2008). Very little action has taken place to develop environmental policies to ensure all food and water collected and harvested from open spaces is safe, and there is limited analysis of how effective these policies are.

Historically, kai could be harvested in amounts that provided a balanced nutritious diet but now food sources are increasingly susceptible to human-generated contamination. Furthermore, pollution and over-fishing have depleted seafood stocks (Te Hotu Manawa Māori). Indigenous people across the world, including Māori, traditionally knew what foods could be harvested, and when, but much of this knowledge has been lost. There is a growing trend across the world to encourage the return of traditional food collection practices in a safe way. Foraging for food, carrying out 'guerrilla gardening' which involves planting fruit or vegetables in public spaces, and establishing community gardens are behaviours gaining popularity across New Zealand, as people look for other ways to access food and increase their fruit and vegetable intake. There is some indication that people are not aware of where public crop trees and plants are located and are uncertain of the rules about harvesting them. There is scope to reintroduce traditional kai collection within the education system, such as Enviroschools and Kids' Edible Gardens, to teach people which foods can be safely harvested and where they can be found.

The Nelson Marlborough District Health Board has worked with local iwi to produce the Nga Marama planting and harvesting guide for schools. This describes traditional food collection and planting as part of a health-promoting initiative in some South Island schools (Allison 2011).

In addition to initiatives such as these, some regional and local councils are working to improve the quality of local water supplies. Many are also developing strategies to manage local open spaces and to create an integrated local landscape of streets, wild areas, public housing, schools, parks and reserves (City of Boston 2008). The purchase of land for these uses will have an impact on food security.

BUILDING AND USING RESEARCH

While there is a lot of research on the factors linked with food security, mainly in the United States, there has been less investigation of what can be done to ensure all families and whānau are able to access sufficient affordable and healthy food (Gorton 2009). Research of this nature could evaluate existing and new initiatives.

Bringing together evidence on the causes of food insecurity, health promotion theory, and implementing solution-oriented research will identify where resources should be directed to improve food security.

Priority two: Restrict marketing messages

Children are free from exposure to food and beverage marketing messages

Our vision for our communities is that the nutritious choice for families and whānau is the easy choice. Parents are able to make decisions based on common sense, intuition and culture. There is no requirement for label reading, calorie counting or health claims to assist parents in their decision-making about the food they provide for their families.

Children are protected from the relentless over-exposure of messaging about food through marketing (advertising, sponsorship, promotions and social media). Food industry-sponsored learning materials, events and sporting activities are redundant as legislation is in place to prevent food and beverage marketing to children in any form or setting.

Families and whānau define the social and cultural aspects of food, nutrition and family meal patterns that work best for them. Communities uphold and encourage the mana of parents, families and whānau to create and pass on practices and traditions that nourish themselves and their whānau, while protecting the environment for future generations.

In this environment children will thrive, grow, and learn to be the healthiest they can be.

BACKGROUND

'New Zealand children live in an environment where unhealthy food is more heavily promoted, more accessible and, for the most part, cheaper than healthy food.'

That's the conclusion from several studies from the Health Promotion and Policy Research Unit (University of Otago, Wellington).

The past few decades has seen a large increase in the range of food and beverage options available to New Zealand families, coupled with a rise in the volume and type of food and beverage marketing activity directed at children.

Marketing methods and messages have become increasingly sophisticated. Advertisements and marketing on television, the internet, magazines, billboards, and via sponsorship and other means are bombarding children with messages about what to eat and drink. These messages are reaching families in their living rooms, at schools, through fundraising activities, at sports grounds and other places where children and families gather.

This is threatening parents' ability to nourish their children and families. Research has shown children have difficulty differentiating between advertisements and programming, yet marketers in New Zealand continue to use numerous marketing channels to target children with promotional messages around food and drink consumption. Parents are constantly challenged to review their beliefs on what food and drink options are consistent with good nutrition.

The current New Zealand guidelines about the marketing of food and drink products to children fail to adequately protect children from exposure to harmful messages.

RECOMMENDED ACTIONS

1. Create comprehensive legislation to protect children from food and beverage marketing.
2. Make all childhood settings marketing-free zones (including schools, preschools, sport, recreation and other out-of-school activities).
3. Support the right of families/whānau to live in communities where making the nutritious choice for their families is the easy choice.
4. Develop community capacity and leadership (empower parents, whānau and children) to protect children from food and beverage marketing messages.
5. Create cross-sector commitment (education, health, sport, recreation, government and non-government) to protect children from food and beverage marketing messages.
6. Build and disseminate evidence for action (research, evaluation, case studies and stories).

EVIDENCE TO SUPPORT ACTIONS

The epidemic of obesity has many drivers, with an important one being the high levels of marketing of foods and beverages that specifically target children (International Obesity Taskforce 2006; Swinburn et al 2011). Protecting children from commercial exploitation is a societal responsibility. The United Nations Convention on the Rights of the Child (UNCRC) and the Rome Declaration on World Food Security endorse the rights of children to adequate, safe and nutritious food (UN 1990; FAO 1996). A child is defined in the UNCRC as a person under the age of 18 years.

Systematic reviews of the extent, nature and effects of food marketing to children conclude that advertising and other forms of marketing are widespread and increasing across the world, and this is having a negative effect on children's food preferences, purchase requests and consumption patterns (WHO 2010).

Controlling this marketing is a priority for addressing childhood obesity (International Obesity Taskforce 2006). In May 2010, the World Health Assembly (WHA) endorsed a set of recommendations on the marketing of foods and non-alcoholic beverages to children (WHO 2010).

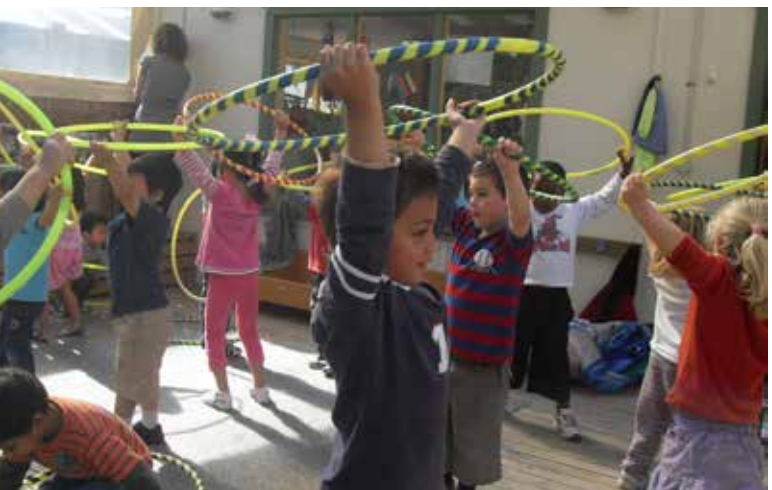
The World Health Organization (WHO) defines marketing as 'any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service' (WHO 2012).

Marketing includes advertising (broadcast and non-broadcast), product placement and branding (eg, branding on children's books), sponsorship (eg, community and school events, school programmes), direct marketing (eg, money-off vouchers), product design and packaging (eg, product shape and colour, child-directed imagery) and point of sale (eg, loyalty schemes) (WHO 2012).

From the evidence available it is clear that comprehensive legislation is needed.

ENABLERS	ACTIONS	OUTCOMES
Create cross-sector commitment	Comprehensive legislation	All childhood settings are marketing-free zones
Develop community capacity and leadership		The right of families/whānau to live in communities where making the nutritious choice for their family is the easy choice is supported
Build and disseminate evidence for action		

For every dollar WHO spends to improve the nutrition of the world's population, the food industry spends $500 to promote processed foods. By 2001, the world food industry advertising budget was estimated at $40 billion, more than the Gross Domestic Product (GDP) of 70 percent of the world's nations (Dalmeny et al 2003).



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EVIDENCE TO SUPPORT ACTIONS CONTINUED

In New Zealand, advertising is self-regulated by the communications and media industry, with the Advertising Standards Authority (ASA) responsible for setting and enforcing voluntary codes of practice. In 2010 the ASA revised its codes and established the Children's Code for Advertising Food 2010. The Code applies to 'all advertisements for food and beverages that influence children, whether contained in children's media or otherwise'.

Advertising is defined as 'any form of advertising and includes advertising which promotes the interest of any person, product or service, imparts information, educates, or advocates an idea, belief, political viewpoint or opportunity' (Advertising Standards Authority 2012).

New Zealand evidence suggests there has been no decline in children's exposure to advertising of unhealthy food (Bowers et al 2012). The current industry self-regulatory advertising system, despite some minor improvements, fails to adequately protect children from exposure to unhealthy food marketing (Bowers et al 2012). Seventy percent of food advertising on TV in New Zealand, in the time that children watch, goes against ideas of healthy nutrition, and in fact supports unhealthy diets for children. Research shows that children could easily see 7,134 food advertisements in one year if they watch TV two hours a day (Shaw 2009).

Parents have become more supportive of regulations limiting specific types of food marketing to children, including TV commercials, cartoon characters on packages, and social media (Harris et al 2012).

A 2007 survey of New Zealand parents and grandparents found that more than 4 out of 5 wanted junk food advertising to children to be banned (Fight the Obesity Epidemic 2007).

Despite evidence that the current self-regulatory system is not effectively protecting children, food and marketing industries have managed to retain the industry self-regulatory policy framework. As Field and Gauld (2011) conclude, 'the case of food marketing to children in New Zealand provides compelling evidence that vested interests have worked to maintain an outdated policy response to a twenty first century problem, now classified as an obesity epidemic'.

Under self-regulation, industry will do the minimum required to avoid legislation or legally-enforceable regulations. Only legally-enforceable regulations have sufficient authority to ensure a high level of protection for children (International Obesity Taskforce 2006).

WHO recommends *'Member States should consider different approaches, i.e. stepwise or comprehensive, to reduce marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt, to children'* (WHO 2010). The WHO implementation framework describes the options for a comprehensive or stepwise approach. Neither approach includes industry self-regulation (WHO 2012).

The three options for a comprehensive approach include:

1. Restrict the marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt to children by addressing 'exposure' and 'power'.
2. Restrict marketing of all foods and beverages to children.
3. Restrict marketing of all products to children (eg, Quebec, Norway and Sweden).

The three options for a stepwise approach include:

1. Restrict marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt, to children by addressing 'exposure' specifying when, where, to whom, and for what products, marketing will be permitted.
2. Restrict marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt, to children by addressing 'power'. Place restrictions on the use of marketing techniques that have a particularly powerful effect. This involves specifying which marketing techniques will not be permitted.
3. Restrict marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt, to children by addressing both 'exposure' and 'power'. Combine a restriction on the use of marketing techniques that have a particularly powerful effect across all media and settings with a restriction of marketing of foods to children in selected media and settings.

All settings where children gather should be included in the legislation. A comprehensive approach avoids the need to specify every possible setting (Persson et al 2012). WHO recommends 'settings where children gather should be free from all forms of marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt. Such settings include, but are not limited to, nurseries, schools, school grounds and pre-school centres, playgrounds, family and child clinics and paediatric services and during any sporting and cultural activities that are held on these premises' (WHO 2010).

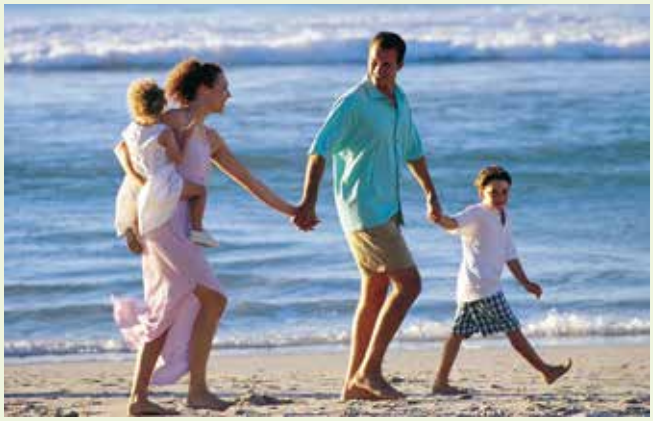
RECOMMENDATION

We favour option two of the comprehensive approach identified by WHO (2012): 'restricting marketing of all foods and beverages to children'. It is simple and requires no system to distinguish between food types. It is our view that children are best informed about healthy eating by parents, schools and health professionals rather than commercial entities with vested interests. We acknowledge this approach restricts the commercial promotion of more healthy foods to children, but as this is currently almost non-existent, the impact should be minimal. It does not limit non-commercial promotion of healthy foods, leaving opportunities for public-private partnerships and government-funded campaigns.

Priority three: Less sitting (sedentary behaviour)

Being active is the norm and people avoid sitting for too long

Our vision is that New Zealand is where people live non-sedentary lifestyles, and are physically active at work, home, school, and play – healthy, happy and moving. Where bodies and minds are active throughout the day, meeting challenges as they arise. Where people prefer to be active instead of sitting before a screen, and where children and adults can easily and safely walk or cycle to school and work. Where schools, workplaces, and neighbourhoods are active places that support wellbeing.



BACKGROUND

Changes to the way we commute, work, entertain ourselves, live, recreate, and communicate have all resulted in reduced demands on us to be active. Time spent sitting is increasingly displacing daily activity.

This time spent sitting, or being sedentary, is now recognised as detrimental to our health.

Sedentary behaviours are those that involve sitting or reclining with little other activity. Too much sitting is different from too little exercise. It is not simply an absence of moderate-to-vigorous physical activity. A person can be sufficiently physically active and meet the physical activity guidelines, but still spend extended periods of time sitting at work, sitting while commuting or while watching television.

> ***'Any efforts to reduce sedentary behaviour should be seen as an addition to, and not a replacement for, the well-recognised benefits of moderate-to-vigorous physical activity.'***

Evidence suggests that too much sitting may substantially increase the risk of chronic disease, regardless of habitual physical activity levels. That means the potential negative effects from sedentary time every day may not be offset by bouts of moderate-to-vigorous physical activity a few times each week.

RECOMMENDED ACTIONS

1. Use consistent definitions to describe sedentary behaviour, inactivity, and physical activity, and the differences between these.
2. Update physical activity guidelines to specifically address sedentary behaviour, and differentiate between inactivity and sedentariness.
3. Initiatives and advice aimed at increasing physical activity should also include advice on reducing total sitting time and breaking up periods of prolonged sitting with frequent, short bouts of standing or other activities.
4. Interventions addressing sedentary behaviour should be thoroughly evaluated and include measures, or proxy measures, of sedentary time in order to add to the body of evidence.
5. Researchers studying physical activity should also include measures, or proxy measures, of sedentary time.
6. Researchers in this field should consider the evidence gaps listed in this document and undertake projects that can help address these.

HEALTH CONSEQUENCES OF TOO MUCH SITTING

In contrast to the large amounts of data about exercise and physical activity, less is known about the impacts of prolonged sitting or sedentary behaviour. However, there is a rapidly growing body of evidence that suggests increased sedentary time is a distinct and independent risk factor for several adverse health outcomes.

Studies suggest associations between sedentary behaviour and:

- CVD and dyslipidaemia
- diabetes and the biomarkers of diabetes
- waist circumference, BMI, weight gain and obesity.

Sedentary behaviour is associated with increased risk for all-cause and CVD-related mortality and dyslipidaemia in both men and women. These associations appear to be independent of body mass index and time spent in moderate-to-vigorous physical activity (Dunstan et al 2012; Owen et al 2012; Schofield et al 2009; Thorp et al 2011).

There is increasing evidence of a relationship between sedentary time and both diabetes and biomarkers of diabetes (eg, plasma glucose, lipids, abnormal glucose tolerance) (Dunstan et al 2012; Schofield et al 2009).

There is evidence that increased sedentary time, particularly TV viewing time, is associated with increased waist circumference, BMI, and weight gain (Owen et al 2012; Schofield et al 2009). However, this may be mediated by baseline and follow-up BMI. There is stronger evidence for an association between TV viewing time and weight gain and obesity in adults, while findings have been mixed for other sedentary behaviours and total sitting time. The relationship between TV viewing time and weight may be because of increased energy intake (ie, snacking while watching TV), rather than sedentary behaviour per se (Thorp et al 2011).

In children and adolescents, sedentary time (particularly TV watching) is a strong predictor of obesity and increased BMI in adulthood, independent of physical activity and childhood BMI (Hancox et al 2004; Landhuis et al 2008; Thorp et al 2011).

There is limited evidence for a link between cancer and sedentary time (Dunstan et al 2012; Schofield et al 2009; Thorp et al 2011).

It appears prolonged, unbroken sitting time is worse than sedentary time that is regularly broken with frequent breaks. In both the AusDiab and NHANES studies, adults whose sedentary time was prolonged and unbroken had poorer outcomes (cardio-metabolic markers, waist circumference, BMI, and c-reactive protein) than those who had more frequent breaks in their sedentary time. These associations were consistent across age, sex and ethnicity and independent of total sedentary time, and moderate-to-vigorous physical activity (Dunstan et al 2012; Owen et al 2012).

DEFINING PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

When talking about sedentary behaviour, we strongly recommend the consistent use of the following terminology and definitions:

Sedentary behaviours are those that involve sitting or reclining with low levels of metabolic energy expenditure (energy expenditure of 1.0–1.5 Metabolic Equivalent of Tasks - METs). For example, reading, writing, sewing, eating, computer work, light office work, gaming, watching television, and so on – sitting without otherwise being active.

In simple terms, it is acceptable to refer to sedentary behaviour as ‘sitting too much’ and to encourage people to ‘sit less’.

Sedentary behaviour is not physical inactivity or being inactive – these terms simply imply a lack of exercise (or moderate-to-vigorous physical activity) rather than too much sitting, or sitting for prolonged periods.

Light-intensity physical activity is the predominant determinant of daily energy expenditure and includes activities such as household tasks, standing, slow walking, and other activities of daily life (energy expenditure of 1.6–2.9 METs).

Moderate-to-vigorous physical activity includes activities such as brisk walking, cycling, swimming, or jogging/running (energy expenditure of at least 3.0 METs).

HOW SEDENTARY ARE WE?

TV watching is New Zealand's most popular leisure time activity. On average, New Zealanders watch just over two hours of TV or videos per day. After sleep and paid work, watching TV/videos is the third most time-consuming activity in New Zealand. In general, younger (12–24 years) and older people (over 55 years) watch more TV/videos than those aged 25–54, with those over 65 years watching the most (around 3.5 hours per day) (Statistics New Zealand 2011).

The New Zealand Health Survey found two-thirds of children aged 5–14 years watch two or more hours of TV per day (Ministry of Health 2008). However, time spent watching TV appears to increase with age. Sixty percent of children aged 5–9 watch less than two hours of TV per day, whereas only 30 percent of young people aged over 15 years do (Clinical Trials Research Unit 2010).

TV watching is the most common sedentary behaviour of New Zealand children and young people who, on average, spend 124 minutes per day watching TV, 22 minutes per day sitting at a computer (outside of school), and 19 minutes per day playing non-active video games (Clinical Trials Research Unit 2010).

New Zealand data as part of the International Prevalence Study found 25 percent of people spent more than seven hours per day sitting (Bauman et al 2011).

It is estimated 51–68 percent of an adult's waking hours are spent sedentary. In contrast, moderate-to-vigorous physical activity accounts for only five percent of time use, while light-intensity physical activity accounts for 27–44 percent (Dunstan et al 2012). International data suggests children spend 50–75 percent of their waking hours sedentary (Salmon et al 2011).

It appears almost all variation in sedentary time is related to the extent to which sedentary time displaces light-intensity physical activity – that is, the more time people spend in light-intensity physical activity, the less time they spend sedentary (Dunstan et al 2012).

CURRENT GUIDELINES AND RECOMMENDATIONS

Current physical activity guidelines for children and young people (Ministry of Health 2012; Sport New Zealand 2012) state young New Zealanders should:

- do 60 minutes or more of moderate-to-vigorous physical activity each day
- be active in as many ways as possible
- be active with friends and whānau at home, school and in the community
- spend less than two hours a day (out-of-school time) in front of a television, a computer, or a game console.

The guidelines for adults are outdated and do not reflect current thinking about reducing sitting time. For example, the Ministry of Health guideline statements about physical activity for adults are based on Hillary Commission recommendations made in 2001. The recently published Primary Care Handbook also uses these old recommendations from 2001 (New Zealand Guidelines Group 2012).

No statements about reducing sitting time or increasing low-intensity physical activity are made in either the current guidelines for adults or children and young people.

A number of countries, including the United Kingdom, Canada, and Australia, have provided public health guidelines aimed at reducing the amount of time spent sedentary or sitting. While there is not enough evidence to make a quantitative recommendation at present, New Zealand should also move to update its guidelines and include a statement about minimising sitting or sedentary time and breaking up periods of prolonged sitting.

EFFECTIVE INTERVENTIONS

So far, there have been a small number of interventions aiming to reduce sedentary time. Often interventions have been aimed at increasing physical activity rather than specifically decreasing sedentary behaviour. As such, there are still a number of unanswered questions. One is how changing one sedentary behaviour impacts on other sedentary or physical activity behaviours. For example, if television time is decreased, how is that time re-allocated? Simply shifting time from one sedentary behaviour to another will not have any impact on health and wellbeing.

Initiatives to reduce sedentary behaviour (mainly screen-time or television-time) in children have found small but significant reductions. These interventions included one or more of the following components: educational component; behavioural component such as television planning; weekly budgets, and/or contracts with rewards; school, family and/or community components; and electronic television time monitors to control television time.

A recent Australian study recruited office workers to assess changes in sitting time and activity levels after installation of sit-stand workstations (Alkhajah et al 2012). It found workplace sitting reduced by more than two hours per day.

In order to make evidence-informed public health guidelines and policies, more research is needed on the:

- biological mechanisms leading to poor health outcomes
- prevalence of sedentary behaviour and variation across different population groups and contexts
- improved reliability and validity of measures and population-based studies using these high-quality measures
- determinants of sedentary behaviour, including barriers and motivators for change
- feasibility and efficacy of changing sedentary behaviour in various contexts.

> *'In order to make evidence-informed public health guidelines and policies, more research is needed.'*

Appendices

KEY USEFUL FRAMEWORKS FOR HEALTH PROMOTION AND PROGRAMME PLANNING

What is health promotion?

- Supporting people to increase control over their health
  – *tino rangatiratanga o te hauora*
- Focus on wellbeing and prevention of disease as opposed to illness and treatment
- Groups and populations as opposed to individuals
- Changing the environment
- Community leadership

Māori health models

Health promotion is about creating a climate within which human potential can be realised.

~ Prof Mason Durie

Early Māori public health systems

- Tapu – *off limits*
- Noa – *relaxed access*
- Rāhui – *practical way of moving from one state to another*

Parts of the body were tapu. People at different times, for example women giving birth, relatives of a deceased person, or soldiers prior to battle. Food sources were occasionally tapu eg, nesting pigeon, fishing grounds in spawning season, kumera planting and weeding.

Māori involvement means:

- achieving potential
- making decisions
- maximising choices
- being part of the consultation process.

MAKING HEALTHY CHOICES THE EASY CHOICES

Models of health promotion

- Te Pae Māhutonga – Prof Mason Durie
- Ottawa Charter – International Charter for Health Promotion

TE PAE MĀHUTONGA

MAURI ORA: ACCESS TO TE AO MĀORI

– Puritia ki ngā taonga tuku iho a ō tātou tipuna

- Cultural activities
- Indigenous links
- Language and knowledge
- Marae
- Land

WAIORA: ENVIRONMENTAL PROTECTION

– He pai te whenua, he pai hoki ngā hua

- Waterways
- Land
- Identification of new environments
- Clean air
- Opportunities to experience the natural environment



Māori health models continued

TOIORA: HEALTHY LIFESTYLES

– He aha te mea nui o tea ao? Māku e ki ake, He tangata, he tangata he tangata!

- Codes for living
- Effective parenting
- Safety
- Alcohol and drug use
- Risks to health

TE ORANGA: PARTICIPATION IN SOCIETY

– Whāia te iti kahurangi, me tuohu koe, he maunga teitei

- Access to technology
- Closing the gaps
- Educational success
- Health services
- Income, employment

NGĀ MANUKURA: LEADERSHIP

- Political leadership
- Health impacts of policies and programmes
- Health and community workers
- Alliances and networks
- Community leadership

TE MANA WHAKAHAERE: AUTONOMY

- Capacity for self governance
- Community priorities
- Recognition of aspirations
- Local control
- Community ownership

Acknowledgments: Thank you to Toi Tangata for providing the notes above on Māori models of health promotion.

Pacific health models

ABOUT PACIFIC HEALTH MODELS

What are Indigenous Pasifika models?

Pasifika models are based on Pasifika concepts, knowledge, values and practices.

Indigenous means pertaining to the first or original inhabitants of a place. For example, Māori are the indigenous (Tangata Whenua) of Aotearoa New Zealand.

Note: Pasifika refers to diverse groups in New Zealand that trace their origins to indigenous peoples of the island nations of the Pacific.

Why have Pasifika models?

- Diverse cultures need diverse tools (models) in order to be effective; one tool (model) for all is a recipe for disaster.
- Pacific peoples see the world through their own eyes and experiences.
- To provide tools that are culturally appropriate and effective for Pacific peoples in order to improve and maintain their material and spiritual health and wellbeing.
- Indigenous knowledge enriches our basket of knowledge.

(Lima 2009)

Seitapu model

Sei is the flower worn in the hair; Tapu is the sacred position of the flower on the head, a strong sense of beauty, spirituality and power. Put together, Seitapu. Proverbs are the carriers of our values; these are reference points to our wellness. People don't care about what we know, until they know we care.

Samoan Pulotu Karl Endemann flower model:

- Four petals: *clinical and cultural theory, clinical and cultural practice.*
- Four themes: *families, language, tapu, organisations.*
- Three levels: *core (basic), advanced (confident), specialist (expert).*

(Annandale and Instone 2004)

Fonofale model

Samoan Pulotu Karl Endemann – foundation or fa'avae (family-aiga).

Four posts or pou-tu- fa'aleagaga (spiritual), fa'aletino (physical), mafaufau (mental), isi mea (other - eg, finance, gender, age, education, etc).

Above the roof or falealuga (culture) surrounded by environment, context and time.

(Pulotu-Endemann 2001)

Pacific health models continued

Photo supplied by Pacific Island Food and Nutrition Action Group

Popao model

This model looks at taking a journey into wellness.

The Popao or outrigger canoe has been used as a metaphorical model for mental health service users and professionals for a shared understanding of the treatment process as a 'journey' towards recovery and strength within a Pacific paradigm.

(Fotu and Tafa 2009)

Tivaevae model

Teremoana Maua-Hodges (2000) – making of a patch quilt: this is a research-based model from the Cook Islands. One leader delegates the role of each person who goes about their work and is gathered to be joined together.

This model points to the importance of focusing on the process of interventions and understanding of Pacific concepts such as the use of Pacific languages, spirituality, gender, responsibilities and intergenerational concepts.

(Teremoana Maua-Hodges 2000)

Pandanus mat

This is a weaving model of creating, healing, strengthening and collaboration. The 'pandanus mat' model of care means health is integrated within wider family and cultural values and beliefs. The approach is very holistic, weaving spiritual wellbeing with the physical, social and mental strands of health.

(Glover et al 2010)

Kakala model

Kakala is a Tongan model that represents a garland made of flowers and leaves to be worn on special occasions, or presented to a special guest as a sign of 'ofa' (love) and 'faka'apa'apa' (respect).

(Konai Helu-Thaman 2002)

There are three stages to this model:

Toli

Selection and gathering: the gathering and selection of fragrant flowers, fruit, leaves and other fragrant and decorative elements required for making the Kakala.

Tui

Preparation and making of the garland: the making or weaving of the Kakala using the flowers gathered. In the process of Tui, remember the following:

- the time taken to make the garland depends on the nature and complexity of the garland
- the pattern or style used depends on the occasion and the person receiving it.

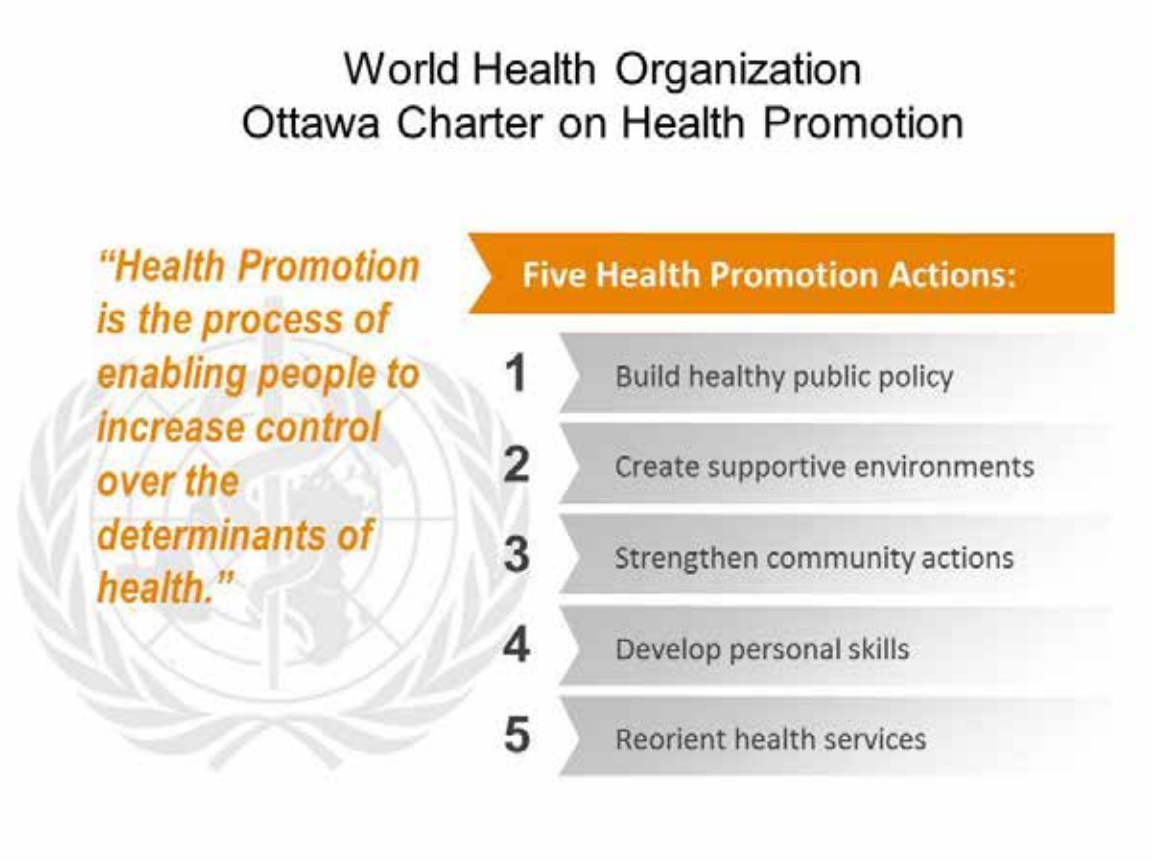
Luva

Giving away of the garland. In the process of luva, remember the following:

- Kakala, the end product, symbolises important values of sharing
- the receiver is expected to pass on his/her Kakala to someone else.

(Vaioleti 2006)

Ottawa Charter



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